S-9209

REPORT ON

CONTRACT SERIAL NUMBER: OSQ85-00311

CONTRACTOR: Nolan, Davis & Associates (N.S.) Limited

EVALUATION OF POINT LEAMINGTON DEPOSIT NEWFOUNDLAND

PHASE I - SAMPLING

Project No. H86405

Submitted to:

Supply and Services Canada

by:

Nolan, Davis & Associates

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June 1986

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NOLAN, D-/I
& ASSOCI-ES
(NS) LIMITE:
CONSULTING ENGINEERS AIC [illegible]

June 18, 1986
File No. H86405
DSS File No. 06SQ.23440-5-9209

Energy, Mines and Resources
CANMET
Mineral Sciences Laboratories
555 Booth Street
Ottawa, Ontario
K1A 0G1

Attention: Dr. J. Jambor

Dear Sir:

RE: Evaluation of Point Leamington Deposit
Newfoundland
Phase I - Sampling

Please find enclosed ten (10) copies of our final report regarding the above mentioned project. If you have any questions concerning the material contained herein, please contact us at your convenience.

Yours very truly,

NOLAN, DAVIS & ASSOCIATES

F.J. Nolan, P.Eng.
President

FJN/mad
Encls. (10)

Mailing Address:
P.O. Box 1021 Armdale
Halifax, Nova Scotia
B3L 4K9

Suite 202
2745 Dutch Village Road
Halifax, Nova Scotia

Telephone
(902) 453-491
Telex
019-22810

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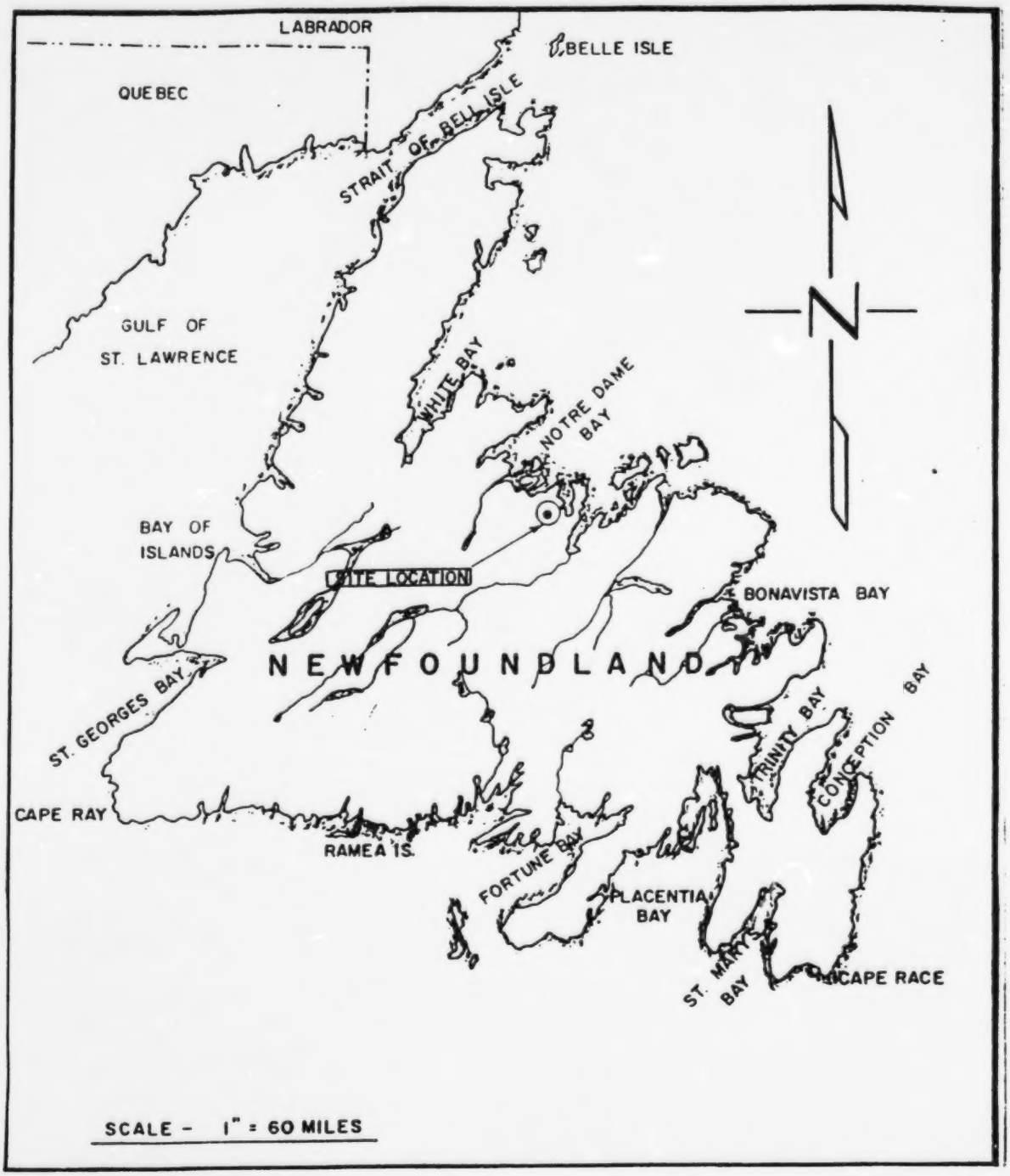
1.0 INTRODUCTION

A diamond drilling project consisting of 4 holes totalling 609.6 metres was undertaken in March 1986, on the Point Leamington massive sulphide deposit, Point Leamington, Newfoundland (Figure 1). The purpose was to provide NQ size core samples of the deposit for planned mineralogical and metallurgical studies. The project was undertaken for the Canada Centre for Mineral and Energy Technology (CANMET), Energy, Mines and Resources Canada, under Contract No. OSQ85-00311. This project comprised a particular phase of the mining and minerals technology program of the Canada-Newfoundland subsidiary agreement on mineral development, 1985-1989. Scientific direction was provided by Dr. J.L. Jambor. Contract management was provided by Dr. R. Agarwaal, Supply and Services Canada.

2.0 GEOLOGY OF DEPOSIT

The Point Leamington massive sulphide deposit was discovered in the early 1970's by Noranda Mines Limited. It has a strike length of 400 metres and an average thickness of 35 metres. It is estimated to contain in excess of 20 million tons of 0.56 percent copper and 2.0 percent zinc. The mineralization consists of fine-grained, bedded, massive pyrite-chalcopyrite with lesser amounts of sphalerite and erratic gold and silver values.



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LOCATION MAP - 1

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FIGURE 1

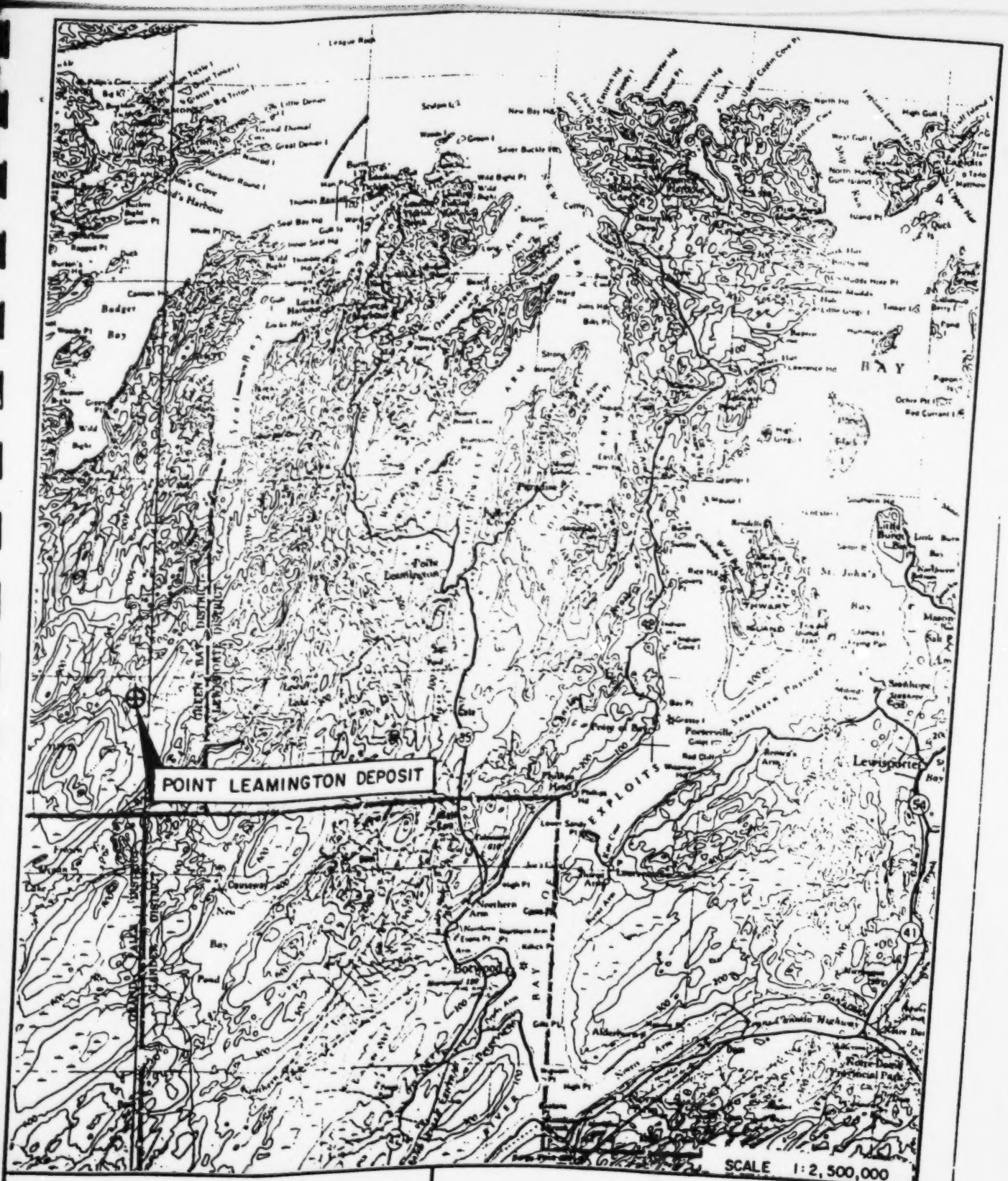
The massive sulphide zone lies near the top of the Side Harbour formation of the Early-Middle Ordovician Wild Bight Group. The hanging wall consists of a chert and sulphide-bearing argillite that may be up to 20 metres thick. These units are overlain by mafic tuff and volcaniclastic rocks. The foot wall is comprised of altered felsic flows and pyroclastics which overlie a thick mafic volcanic sequence. One or more units of altered felsic volcanics and volcanic breccia may also occur within the massive sulphide zone. Mafic intrusive rocks, as sill-like bodies, are prevalent throughout the sequence. They range in texture and composition from fine-grained diabase to coarsely porphyritic gabbro. Figure 2 illustrates the drill hole locations with respect to geology.

3.0 DRILLING PROJECT

The Point Leamington drilling project comprised three phases: 1) pre-drilling, 2) drilling, and 3) post-drilling. Each phase is discussed in detail below.

3.1 Pre-Drilling Phase

The pre-drilling phase consisted of drill hole site selection and a property visit to establish these sites in the field. The selected sites were those proposed by



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LOCATION MAP - 2

H 86 405

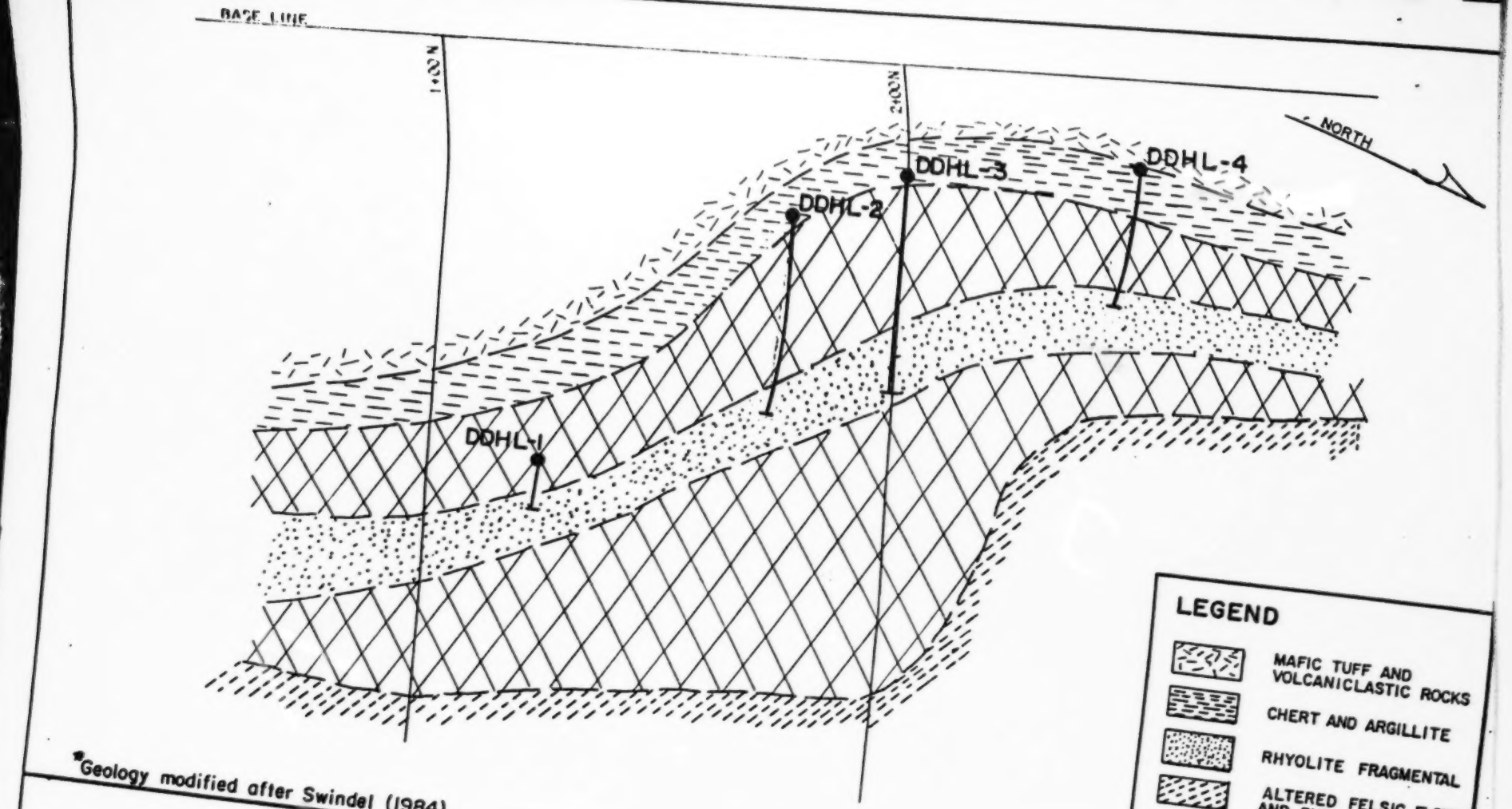
FIGURE 2

Noranda staff. The basis of selection was to obtain maximum massive sulphide intersections for the actual footage drilled. As access to previously collected geologic data, cross-sections, assay results, etc., was restricted, detailed assessment of these sites was not possible. However, the sites were somewhat substantiated through review of available geologic data filed with the Mineral Development Division, Newfoundland Department of Mines and Energy, St. John's, Newfoundland.

The selected sites were established in the field with reference to an existing grid system (Figure 2). All sites were re-chained from the base line to ensure correct location. Those sites not coincident with previously drilled sections were established by pocket transit and chaining using appropriate bearings and distances. Proper alignment of drill holes was facilitated by installing fore and back sights at each location.

3.2 Drilling Phase

A total of 609.6 metres in four holes of NQ-size drilling was accomplished using a Longyear Model 38 drill. Drilling services were provided by Petro Drilling Limited, Springdale, Newfoundland. The drilling was carried out by two crews each working a 12-hour shift.



*Geology modified after Swindel (1984)

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GENERALIZED GEOLOGY WITH DRILL HOLE LOCATIONS

H 86 405

FIGURE 3

The holes, varying in depth from 92.0 metres to 184.7 metres, were drilled at angles varying from minus 69 to minus 87 degrees. Penetrated overburden varied from 8.5 to 11 metres. Casing of NW-size was installed in bedrock to depths below severe surface weathering. All casing was removed on hole completion. Core recovery was excellent. Penetration rates were generally good within the massive sulphide sections. However, only fair to poor rates were achieved in the adjacent country rock. Water supply was obtained from nearby previously drilled and cased holes. Thus, lengthy, heated water lines normally required with winter drilling were avoided. However, difficulty was experienced in obtaining an adequate supply of water in the initial phase of the program.

Drilling progress was regularly checked by a drill site geologist. Drill site lithologic logging facilitated geologic interpretation and aided in determining current drilling position within the rock sequence. Finally, Tropari tests were performed near the bottom of each hole to ascertain any deviation in dip or direction of dip of the holes.

3.3 Post-Drilling Phase

All of the core was securely placed in covered boxes, appropriately labelled, and transported by truck to St.

John's. It had been intended to deliver the core to the Torbay facilities of the Newfoundland Department of Mines and Energy. But, due to a labour dispute involving government employees, the core storage facility was not accessible. It was, therefore, taken to the premises of Nolan, Davis & Associates on Blackmarsh Road on April 4, 1986, where it was safely stored until its delivery to the Torbay core storage facility on May 12, 1986.

Sampling of the core was carried out over a four-day period, May 14 to 17, under the supervision of Alan Sexton of Nolan, Davis & Associates. Massive sulphide samples were cut parallel to the core axis, by means of a diamond blade circular saw, resulting in a slice with maximum thicnkess of about 1 cm and measuring approximately 10 cm in length. Since samples were chosen on the basis of sulphide mineralization, the number of samples in each hole varied: Hole No. 1 - 78 samples; Hole No. 2 - 35; Hole No. 3 - 48; Hole No. 4 - 28, for a total of 189 samples.

The drill hole logs were prepared in the field by the drill supervising geologist and later reviewed and edited in Nolan, Davis & Associates' office. Copies of detailed core logs are located in Appendix 1 of this report.

4.0 COMMENT

The project was completed successfully in respect to the basic requirements as set out in the terms of reference. The drilling program was started approximately one week late and took one week longer to complete than scheduled. Because of the time of year, conditions in the field were difficult, especially during the mobilization phase. Drilling productivity was less than expected in the non-mineralized host rocks. However, subsequent to the field program, the longest delay experienced during the entire project resulted from the labour dispute which affected provincial government employees in Newfoundland. As a consequence, the core was temporarily stored in St. John's awaiting its final shipment to the government core storage warehouse. This delay alone added five weeks to the schedule. In all, the delays resulted in the completion date being a month and a half behind the proposed schedule.

* * * * * * * * * * * * * * * * *

REFERENCES

Andrews, K., 1979. Mineral Occurrence Map 80-4, Botwood Sheet. Newfoundland Department of Mines and Energy.

Dean, P.L., 1977. A Report on the Geology and Metallogeny of the Notre Dame Bay Area, to accompany metallogenic maps 12H/1, 8, 9 and 2E/3, 4, 5, 6, 7, 8, 9, 10, 11, and 12. Report 77-10, Mineral Development Division, Department of Mines & Energy, Government of Newfoundland and Labrador.

Swinden, H.S., ____. Geological Setting of Volcanogenic Sulphide Mineralization in the Eastern Wild Bight Group, North Central Newfoundland. Newfoundland Department of Mines and Energy.

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APPENDIX I

Cross-Section of Drill Holes 1, 2, 3, 4

COMPILED MASSIVE SULPHIDE SECTIONS

D.D.H. L-1

8.53	31.26	22.73
34.16	52.70	18.54
62.29	65.04	2.75
66.40	70.40	4.00
76.80	77.30	0.50
82.91	134.42	51.51
138.78	146.60	7.82

107.85 metres

D.D.H. L-2

9.75	25.99	16.24
35.03	35.21	0.18
54.64	55.84	1.20
78.63	85.59	6.96
87.17	102.72	15.55
155.60	163.47	7.87

48.00 metres

D.D.H. L-3

12.50	16.12	[illegible]
16.47	39.14	[illegible]
49.30	61.57	[illegible]
64.00	70.57	[illegible]
82.91	87.07	[illegible]
92.96	93.83	[illegible]
98.96	121.62	[illegible]
123.44	125.57	[illegible]

D.D.H. L-4

25.58	53.14	?
61.79	74.07	

Total 270.64 metres

[illegible]

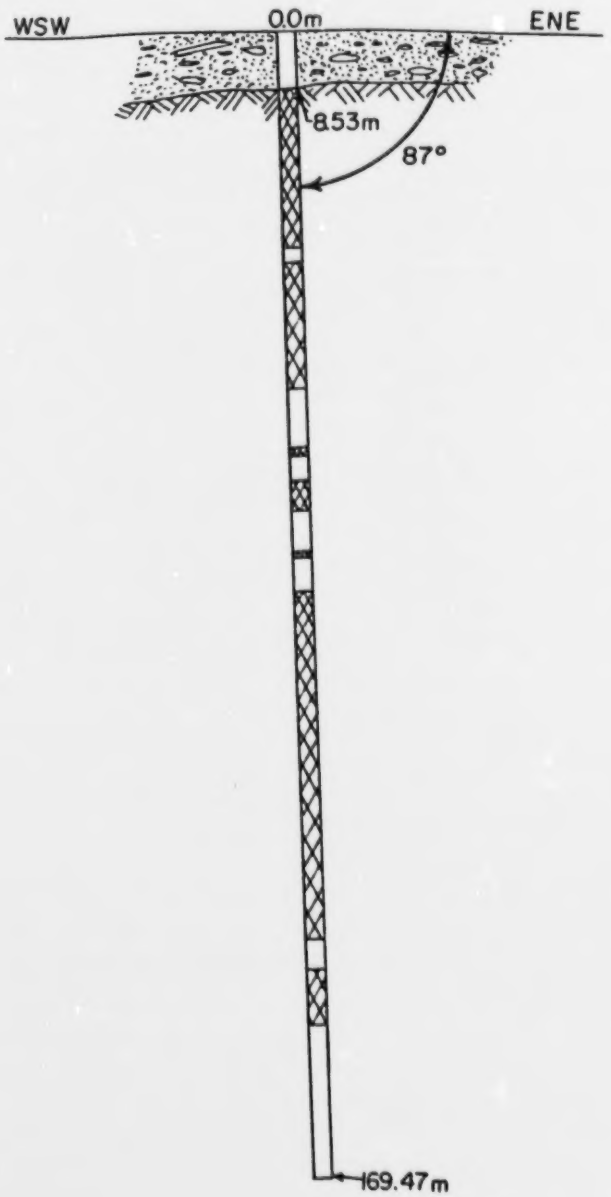
MASSIVE SULPHIDES

SCALE 1:1000

O. L-1

PHIDE SECTIONS

FIGURE 4



LEGEND

OVERBURDEN LAYER

MASSIVE SULPHIDES

SCALE 1:1000

NOLAN, DAVIS & ASSOCIATES

DDH No. L-1
MASSIVE SULPHIDE SECTIONS

H86 405

FIGURE 4

LEGEND

OVERBURDEN LAYER

MASSIVE SULPHIDES

SCALE 1:1000

NOLAN, DAVIS & ASSOCIATES

DDH No. L-2

MASSIVE SULPHIDE SECTIONS

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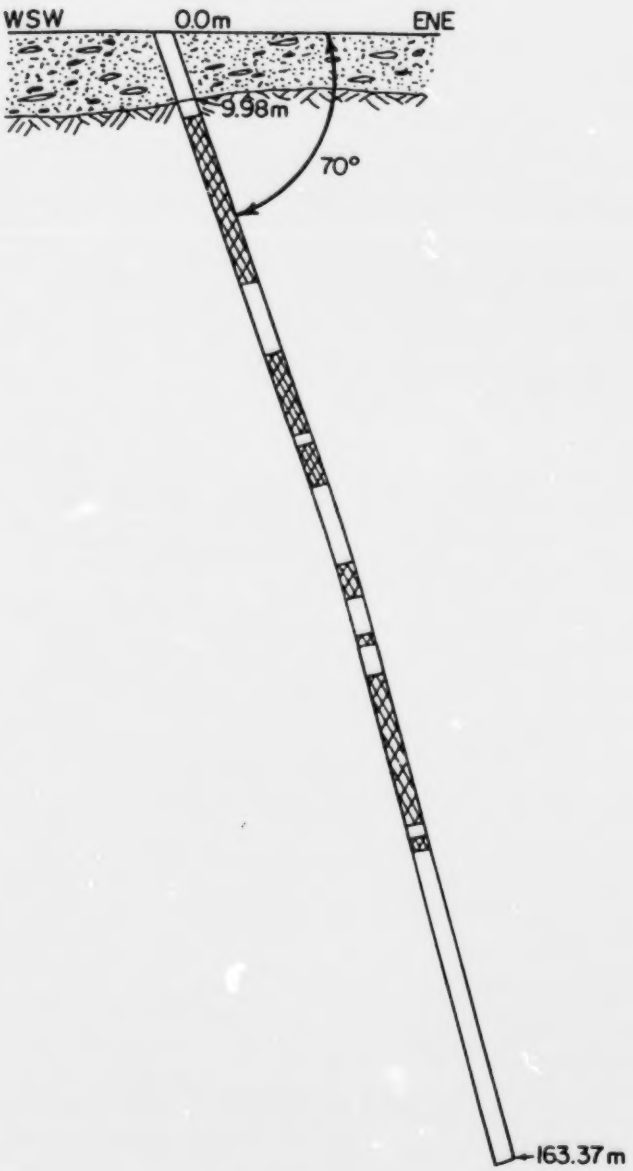
FIGURE 6



LEGEND

OVERBURDEN LAYER

MASSIVE SULPHIDES

SCALE 1:1000

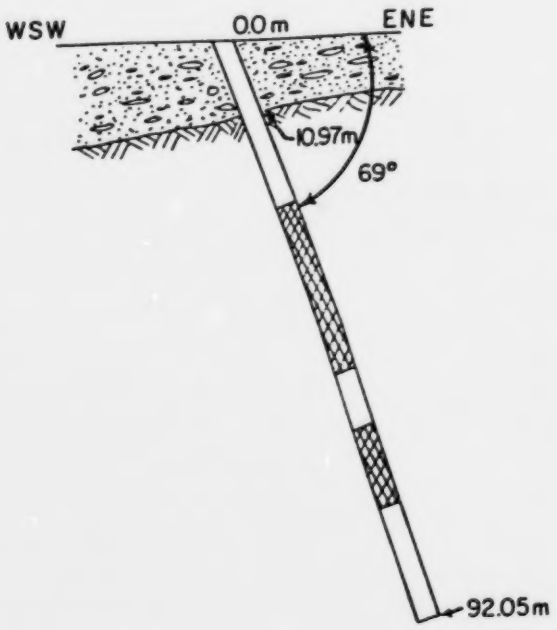
NOLAN, DAVIS & ASSOCIATES

DDH No. L-3

MASSIVE SULPHIDE SECTIONS

H 86 405

FIGURE 6



LEGEND

OVERBURDEN LAYER

MASSIVE SULPHIDES

SCALE 1:1000

NOLAN, DAVIS & ASSOCIATES

DDH No. L-4

MASSIVE SULPHIDE SECTIONS

H 86 405

FIGURE 7

APPENDIX II

Detailed Lithologic Logs of Drill Core

LITHOLOGIC LOG

HOLE NO: L-1 FINAL DEPTH: 169.47 M

SECTION: 1 + 25 N DEPARTURE: 0 + 97 E

DIP: -87° AZIMUTH: 070°

DRILLED BY: Petro Drilling Co. DRILL TYPE: Longyear 38

STARTED: March 7, 1986 COMPLETED: March 12, 1986

CORE SIZE: NQ LOGGED BY: J. James (edited)

Interval in Metres

0 - 9.0	NW Casing (removed)
0 - 8.53	Overburden Cobbles and boulders in sandy matrix.
8.53 - 31.26	Massive Sulphides Fine-grained massive pyrite with less than 5 percent chalcopyrite, widely disseminated sphalerite. Irregular patches of siliceous rock throughout in sections up to 1.45 metres wide. The latter contains up to 50 percent finely disseminated pyrite. Scattered mineralized vugs near top of section. 8.53 - 8.93; broken core. 20.87 - 21.85; lost core. 20.26 - 30.76; fine-grained patches and disseminations of red brown sphalerite (10 percent).
31.26 - 32.47	Brecciated Rock Fragmented siliceous rock. Chloritized. Up to 50 percent disseminated pyrite in matrix.
32.47 - 34.16	Basic Intrusive Patches of altered mafic minerals in a light green-gray, medium-grained ground mass of feldspar and mafic minerals. Chilled, fine-grained contacts.
34.16 - 52.70	Massive Sulphides Fine-grained massive pyrite. Less than 2 percent chalropyrite. Scattered quartz-calcite veins. 34.16 - 36.70; quartz and chlorite, coarser grained. Patches and disseminations of reddish brown sphalerite.

45.26 - 52.70; fragmented, clasts of pyrite and chalropyrite up to 6 mm in diameter in a pyrite matrix. Scattered wisps and patches of sphalerite.

52.70 - 52.85 — Basic Intrusive
Fine-grained to aphanitic, greenish-grey. Broken core.

52.85 - 61.40 — Rhyolite Fragemental
Angular clasts of porphyritic quartz rhyolite fine-grained, siliceous, tuffaceous matrix. 3-5 percent disseminated pyrite.

61.40 - 62.29 — Basic Intrusive
Fine-grained, greenish-grey.

62.29 - 65.04 — Massive Sulphides
Fine-grained, massive pyrite. Locally rhyolite clasts in pyrite-quartz-chlorite matrix.

65.04 - 66.40 — Basic Intrusive
Porphyritic, greenish-green feldspar phenocrysts (1 mm in diameter) in a medium-grained ground mass of altered feldspar and mafic minerals. Scattered narrow, irregular quartz veinlets.

66.40 - 70.40 — Massive Sulphides
Up to 80 percent fine-grained sulphides in siliceous ground mass.
68.59 - 68.90; quartz veining.
69.50 - 70.40; 50 percent sulphides as segregations in fragmental tuffaceous rhyolite.

70.40 - 74.48 — Rhyolite Fragemental
Angular, light to dark greenish-grey porphyritic quartz rhyolite clasts up to 10 cm in diameter. 10 - 30 percent pyrite as disseminations and clasts.
73.88 - 74.48; up to 50 percent pyrite, trace of chalcopyrite and sphalerite.

74.48 - 76.80 — Basic Intrusive
Medium-grained pale greenish-grey.

76.80 - 77.30 — Massive Sulphides
Massive, fine-grained pyrite with traces of chalcopyrite and sphalerite.

77.30 - 79.85 — Basic Intrusive
Segregation of attered mafic minerals in pale greenish-grey, medium-grained ground

mass of altered feldspars and mafic minerials.
79.30 - 79.85; fault gouge.

79.85 - 82.91 — Fault Zone

Broken altered rock with 50 percent sulphides and 40 percent quartz.

82.91 - 134.42 — Massive Sulphides

Fine-grained, massive pyrite, 2 percent sphalerite, rare chalcopyrite.
95.00 - 98.36; up to 25 percent sphalerite
125.70 - 126.65; 10-30 percent sphalerite.
129.75 - 130.10; massive sphalerite.
130.30 - 132.78; 60-75 percent sphalerite.
134.22 - 134.42; massive sphalerite.

134.42 - 138.78 — Mafic Intrusive

Scattered segregations of altered mafic minerals in medium-grained ground mass of altered feldspar and mafic minerals.
Chilled contacts.
134.62 - 134.72; coarse euhedral pyrite and fine-grained disseminated pyrite and sphalerite in quartz.

138.78 - 146.60 — Massive Sulphides

Massive, fine-grained pyrite.
138.78 - 144.36; segregrations, streaks and massive sphalerite sections.

146.60 - 147.51 — Contact Zone-Sulphides

Up to 50 percent pyrite in quartz-chlorite ground mass. Grades into rhyolite fragmental.

147.51 -167.38 — Rhyolite Fragmental

Subangular to subrounded clasts of porphyritic quartz rhyolite up to 12 cm in diameter, averaging 2-4 cm in diameter.
Up to 15 percent pyrite in the matrix.

167.38 - 169.47 — Mafic Intrusive

Porphyritic with feldspar phenocrysts up to 3 mm in diameter in a fine-grained greenish-grey ground mass. Locally, quartz filled fractures.

169.47 — End of Hole

Average Recovery 99.4 percent
Tro-Pari Test
Depth - 169.47
Azimuth - 065
Dip - 86

LITHOLOGIC LOG

HOLE NO: L-2 FINAL DEPTH: 184.71 M

SECTION: 1 + 75 N DEPARTURE: 0 + 38 E

DIP: -73° AZIMUTH: 070°

DRILLED BY: Petro Drilling Co. DRILL TYPE: Longyear 38

STARTED: March 14, 1986 COMPLETED: March 21, 1986

CORE SIZE: NQ LOGGED BY: J. James (edited)

Interval in Metres	
0 - 9.76	NW Casing (left in hole)
0 - 9.75	Overburden Cobbles and boulders in sandy matrix.
9.75 - 25.99	Massive Sulphides Fine-grained massive pyrite, minor chalcopyrite, traces of sphalerite. Scattered quartz filled fractures and siliceous sections. 23.47 - 23.77; lost core.
25.99 - 35.36	Rhyolite Fragmental Rhyolite clasts in siliceous matrix. Fractured with quartz, quartz-calcite, pyrite and/or iron stained fracture fillings. 34.34 - 34.44; altered ground core. 35.03 - 35.21; massive pyrite, quartz veining.
35.36 - 38.40	Fault Zone 1.9 m of core lost.
38.40 - 45.52	Basic Intrusive Dark green segregations of altered mafic minerals in medium-grained ground mass of altered feldspar and mafic minerals.
45.52 - 63.23	Rhyolite Fragmental Rhyolite clasts in siliceous matrix. Scattered sections of disseminated to massive sulphides with minor sphalerite. 49.69 - 49.99; 4 percent sphalerite. 52.73 - 53.34; basic intrusive. 54.64 - 55.84; massive pyrite, minor sphalerite. 55.84 - 63.23; quartz filled fractures.

63.23 - 64.31	Basic Intrusive About 20 percent segregations of altered mafic minerals in medium-grained ground mass of altered feldspar and mafic minerals.
64.31 - 66.45	Graphitic Sediment Black to dark grey, fine-grained graphitic sediment. Pyritic banding at 10 to 30 degrees to core axis.
66.45 - 78.63	Basic Intrusive About 20 percent segregations of altered mafic minerals in medium-grained ground mass of altered feldspar and mafic minerals.
78.63 - 85.59	Massive Sulphides Fine-grained massive pyrite. Rare chalcopyrite.
85.59 - 87.17	Basic Intrusive Small (1-2 mm) segregations of altered mafic minerals in pale greenish-grey ground mass.
87.17 - 102.72	Massive Sulphides Very fine-grained massive pyrite. Some chalcopyrite towards end of section.
102.72 - 103.94	Rhyolite Fragmental Angular, greenish-grey rhyolite clasts to 5 cm in diameter. Scattered segregations of up to 15 percent pyrite.
103.94 - 105.36	Basic Intrusive Fine-grained, pale greenish-grey.
105.36 - 108.41	Rhyolite Fragmental Angular, greenish-grey rhyolite clasts to 5 cm in diameter. Up to 2 percent pyrite in narrow veinlets.
108.41 - 116.32	Basic Intrusive Porphyritic. Feldspar phenocrysts to 1 mm in diameter in fine-grained, greenish-grey ground mass of feldspar and mafic minerals. 110.15 - 116.32; segregation of altered mafic minerals.
116.32 - 155.60	Rhyolite Fragmental Angular, dark to pale greenish-grey rhyolite clasts to 5 cm in diameter. Larger clasts near end of section. Minor pyrite, rare chalcopyrite.

155.60 - 163.47

Massive Sulphides

Fine-grained, massive pyrite. Minor chalcophyrite. Locally, sphalerite.
160.52 - 163.47; up to 5 percent sphalerite in segregations, veinlets and wisps.

163.47 - 184.71

Rhyolite Fragmental

Angular, rhyolite clasts of varing texture and structure. Scattered altered sections.

163.47 - 164.90; sericitic up to 20 percent pyrite, minor chalcopyrite.
164.90 - 165.35; lost core.
165.35 - 166.25; chloritic.
166.25 - 167.42; porphyritic quartz rhyolite clasts of 0.1 to 0.2 m in diameter.
167.42 - 168.30; sericitic matrix.
168.30 - 175.50; siliceous with associated stringers of pyrite, minor chalcopyrite.
175.50 - 184.71; flow banded, chloritic clasts.

184.71

End of Hole

Average Recovery - 98.5 percent

Tro-Pari Test

Depth - 184.71
Azimuth - 77
Dip - 76

LITHOLOGIC LOG

HOLE NO: L-3

SECTION: 1 + 00 N

DIP: -70°

DRILLED BY: Petro Drilling Co.

STARTED: March 22, 1986

CORE SIZE: NQ

FINAL DEPTH: 163.37 M

DEPARTURE: 0 + 27 E

AZIMUTH: 070°

DRILL TYPE: Longyear 38

COMPLETED: March 25, 1986

LOGGED BY: J. James (edited)

Interval in Metres

0 - 10.48: NW Casing
(4.9 m of broken casing and casing shoe left in hole).

0 - 9.98: Overburden
Cobbles and boulders in sandy matrix.

9.98 - 12.50: Rhyolite Fragmental
Greyish white, siliceous rhyolite containing 50 per sulphides, locally massive. Minor reddish brown sphalerite. Rare chalcopyrite.

12.50 - 39.14 Massive Sulphides
Fine grained massive pyrite (80 percent) in siliceous groundmass have chalcopyrite and sphalerite.
16.12 - 16.46; basic intrusive 33.57, 34.10 and 34.32; small blocks of chalcopyrite and sphalerite.
35.00 - 39.14; extremely fine grained, increase in chalcopyrite content.

39.14 - 49.30 Basic Intrusive
Dark to pale green segregations of altered mafic minerals in medium grained groundmass of altered feldspar and mafic minerals.
44.50 - 49.30; sheared and faulted. Broken and ground core.

49.30 - 61.57 Massive Sulphides
Extremely fine grained massive sulphides, mainly pyrite.
53.13 - 55.17; massive pyrrhotite with streaks and diseminations of chalcopyrite and sphalerite.
55.17 - 61.57; scattered segregations (up to 1 cm in diameter) and rare streaks of sphalerite.

61.57 - 64.00 Basic Intrusive
About 20 percent pale to dark green [illegible]ation of altered mafic minerals in medium gra[illegible]undmass of altered feldspar and mafic mi[illegible] Fine grained chilled contacts.

64.00 - 82.91 Rhyolite Fragmental - Sulphides
Angular rhyolite clasts to 5 cm in d[illegible]
64.00 - 68.27; from 25 percent [illegible] massive sulphides in chloritized groundmass
68.27 - 70.57; massive pyrite, rar[illegible] copyrite and sphalerite.
70.57 - 82.91; 5 to 10 percent [illegible]minated pyrite.

82.91 - 87.07 Massive Sulphides
Fine grained massive pyrite have cha[illegible]te and sphalerite.
85.19 - 85.59; basic intrusive

87.07 - 92.96 Basic Intrusive
Porphyritic feldspar and altered ma[illegible]inerals phenocrysts in fine grained gre[illegible] grey groundmass.

92.96 - 93.83 Massive Sulphides
Fine to medium grained massive p[illegible] rare chalcopyrite.

93.83 - 98.96 Basic Intrusive
Fine grained to aphanitic. Locall[illegible] to 30 percent segregations of altered mafic m[illegible]rals.

98.96-121.62 Massive Sulphides
Very fine grained massive pyrite.
99.36 - 107.00; significant chalcopyri[illegible] increase in sphalerite.

121.62-123.44 Basic Intrusive
Fine grained, massive, pale greenis[illegible] grey in color.

123.44-125.57 Massive Sulphides
Fine grained, massive pyrite.

125.57-131.31 Quartz Rhyolite Porphyry
Quartz phenocrysts in white to gree[illegible]ish grey rhyolite. Slightly chloritized. [illegible] percent pyrite in irregular veinlets.

131.31-132.96 Basic Intrusive
Fine grained, pale greenish grey. Some [illegible]lteration along fractures.

132.96-163.37 Tuffaceous Rhyolite
Pale greenish grey. Chloritizied and [illegible]citized.
Fragmented. Up to 10 percent pyrite

163.37 End of Hole

Core Recovery - 100 percent

Tro-Pari Test

Depth - 163.37 m

Azimuth - 071 degrees

Dip - -73 degrees

LITHOLOGIC LOG

HOLE NO: L-4 | FINAL DEPTH: 92.05 M

SECTION: 2 + 00 N | DEPARTURE: 0 + 22 E

DIP: -69° | AZIMUTH: 070°

DRILLED BY: Petro Drilling Co. | DRILL TYPE: Longyear 38

STARTED: March 27, 1986 | COMPLETED: April 3, 1986

CORE SIZE: NQ | LOGGED BY: J. James (edited)

Interval in Metres

0 - 11.47 NW Casing (removed)

0 - 10.97 Overburden
Cobbles and boulders in sandy matrix

10.97 - 16.72 Volcaniclastic Sediments
Dark to medium greenish grey bedded tuff (45 degree core angle).
Beds from a few millimetres to 0.5 metres thick.
Pyroclastic lapilli-sized fragments of chloritic and cherty composition.
10.97 - 12.40; broken core, 50 percent lost
16.32 - 16.72; basin intrusive, aphanitic

16.72 - 25.58 Cherty Argillite
Fine-grained, greyish white to black and pale to dark green. Locally bedded. Numerous irregular veinlets of sulphides, mainly pyrite.
23.31 - 25.58; 25 percent sulphides as segretations and veinlets of pyrite, blebs and veinlets of chalcopyrite and a few wisps of sphalerite. Minor pyrrhotite associated with pyrite.

25.58 - 53.14 Massive Sulphides
60 to 70 percent sulphides in siliceous ground mass. Mainly pyrite with minor sphalerite and chalcopyrite.
25.90 - 26.50; 25 percent pyrrhotite with sphalerite.
26.81 - 27.46; 10 percent pyrrhotite with sphalerite.

53.14 - 61.79 Basil Intrusive
Greenish segretations of altered mafic minerals in greenish grey ground mass of altered feldspar and mafic minerals. Locally, more intensely altered.
53.79 - 53.88; quartz with chalcopyrite blebs.

61.79 - 74.07 Massive Sulphides
Extremely fine-grained pyrite, minor sphalerite and chalcopyrite.
61.79 - 65.04; thinly banded
66.86 - 67.36; basic intrusive
70.41 - 74.07; increase in chalcopyrite

74.07 - 76.76 Rhyolite Fragmental
Angular clasts of porphyritic rhyolite up to 5 cm in diameter. 10 percent pyrite in ground mass.

76.76 - 85.32 Basic Intrusive
About 10 percent segregations of altered mafic minerals in greenish grey ground mass of altered feldspar and mafic minerals
80.38 - 81.28; feldspar porphyry dike
81.28 - 85.32; 30 percent feldspar phenocrysts. Less altered.

85.32 - 92.05 Rhyolite Fragmental
Angular clasts of porphyritic rhyolite
10 percent pyrite in matrix

92.05 End of Hole

Average Recovery: 97.9 percent

Tro-Pari Test:

Depth - 92.05
Azimuth - 079 degrees
Dip - 71 degrees